1. A communication hub comprising:

a silence suppression block configured to compute a silence suppression gain for an incoming call based on a silence suppression realized for the incoming call and a number of currently active calls;

a call admission block configured to control access to a communication network over a communication path based on the silence suppression gain for the incoming call request; and

a control system configured to determine a call type of the incoming call and control the silence suppression block and the call admission block.

10   2. The communication hub of claim 1 further comprising:

an interface system configured to receive the incoming call and exchange call traffic with the communication network over the communication path.

3. The communication hub of claim 1 wherein the call type comprises:

one of a voice call and a voice-band data call.

4. The communication hub of claim 3 wherein the silence suppression block is configured to compute the silence suppression gain based on a number of currently active voice calls.

20   5. The communication hub of claim 4 wherein the silence suppression block is further configured to compute the silence suppression gain based on a mean talkspurt duration.

6. The communication hub of claim 4 wherein the silence suppression block is further configured to compute the silence suppression gain based on a mean silence duration.

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7. The communication hub of claim 4 wherein the silence suppression block is further configured to compute the silence suppression gain based on a packetization time.

8. The communication hub of claim 4 wherein the silence suppression block is further configured to
30   to compute the silence suppression gain based on a number of superposed voice calls.

9. The communication hub of claim 4 wherein the silence suppression block is further configured to compute the silence suppression gain based on an activity factor.

10. The communication hub of claim 4 wherein the silence suppression block is further
5   configured to compute the silence suppression gain based on a silence factor.

11. The communication hub of claim 4 wherein the call admission block is further configured to compute an effective bandwidth for the number of currently active voice calls, a number of currently active voice-band data calls, and the incoming call based on the silence suppression
10 gain.

12. The communication hub of claim 11 wherein the call admission block is further configured to deny access to the communication network if the effective bandwidth is greater than a provisioned bandwidth for the communication path.
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13. The communication hub of claim 12 wherein the call admission block is further configured to grant access to the communication network if the effective bandwidth is less than the provisioned bandwidth for the communication path.

20 14. The communication hub of claim 12 wherein the call admission block is further configured to grant access to the communication network if the effective bandwidth is equal to the provisioned bandwidth for the communication path.

15. The communication hub of claim 12 wherein the communication path is a packet connection.
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16. The communication hub of claim 15 wherein the packet connection is an asynchronous transfer mode virtual channel connection.

17. A method of operating a communication hub, method comprising:

 receiving an incoming call request;

 determining a call type of the incoming call request;

 computing a silence suppression gain based on a silence suppression realized for the

5 incoming call request and a number of currently active calls; and

 controlling access to a communication network over a communication path based on the

silence suppression gain for the incoming call request.

18. The method of claim 17 the method further comprising:

 exchanging call traffic with the communication network over the communication path.

19. The method of claim 17 wherein determining the call type comprises:

 determining if the incoming call request is a voice call request.

20. The method of claim 17 wherein determining the call type comprises:

 determining if the incoming call request is a voice-band data call request.

21. The method of claim 17 the method further comprising:

 computing the silence suppression gain based on a number of currently active voice calls.

22. The method of claim 17 the method further comprising:

 computing the silence suppression gain based on a mean talkspurt duration.

23. The method of claim 17 the method further comprising:

25 computing the silence suppression gain based on a mean silence duration.

24. The method of claim 17 the method further comprising:

 computing the silence suppression gain based on a packetization time.

30 25. The method of claim 17 the method further comprising:

 computing the silence suppression gain based on an activity factor.

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26. The method of claim 17 the method further comprising:

computing the silence suppression gain based on a silence factor.

5   27. The method of claim 17 the method further comprising:

computing the silence suppression gain based on a number of superposed voice calls.

28. The method of claim 21 the method further comprising:

computing an effective bandwidth for the number of currently active voice calls, a

10   number of currently active voice-band data calls, and the incoming call request based on the

silence suppression gain.

29. The method of claim 28 wherein controlling access to the communication network

comprises:

15   denying access to the communication network if the effective bandwidth is greater than a

provisioned bandwidth for the communication path.

30. The method of claim 29 wherein controlling access to the communication network

comprises:

20   granting access to the communication network if the effective bandwidth is less than the

provisioned bandwidth for the communication path.

31. The method of claim 29 wherein controlling access to the communication network

comprises:

25   granting access to the communication network if the effective bandwidth is equal to the

provisioned bandwidth for the communication path.

32. The method of claim 18 wherein exchanging call traffic with the communication network

further comprises:

30   exchanging call traffic over a packet communication connection.

33. The method of claim 32 wherein exchanging call traffic with the communication network further comprises:

exchanging call traffic over a virtual channel asynchronous transfer mode connection.

5   34. A software product comprising:

communication software operational when executed by a processor to direct the processor to determine a call type of an incoming call, compute a silence suppression gain for the incoming call based on a silence suppression realized for the incoming call and a number of currently active calls, and control access to a communication network over a communication

10   path based on the silence suppression gain for the incoming call; and

a software storage medium operational to store the communication software.

35. The software product of claim 34 wherein the communication software is operational when executed by the processor to direct the processor to:

15   receive the incoming call and exchange call traffic with the communication network over the communication path.

36. The software product of claim 34 wherein the communication software is operational when executed by the processor to direct the processor to:

20   compute the silence suppression gain based on a number of currently active voice calls.

37. The software product of claim 34 wherein the communication software is operational when executed by the processor to direct the processor to:

compute the silence suppression gain based on a mean talkspurt duration.

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38. The software product of claim 34 wherein the communication software is operational when executed by the processor to direct the processor to:

compute the silence suppression gain based on a mean silence duration.

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39. The software product of claim 34 wherein the communication software is operational when executed by the processor to direct the processor to:

compute the silence suppression gain based on a packetization time.

5   40. The software product of claim 34 wherein the communication software is operational when executed by the processor to direct the processor to:

compute the silence suppression gain based on a number of superposed voice calls.

41. The software product of claim 34 wherein the communication software is operational when

10   executed by the processor to direct the processor to:

compute the silence suppression gain based on an activity factor.

42. The software product of claim 34 wherein the communication software is operational when executed by the processor to direct the processor to:

15   compute the silence suppression gain based on a silence factor.

43. The software product of claim 36 wherein the communication software is operational when executed by the processor to direct the processor to:

compute an effective bandwidth for the number of currently active voice calls, a number

20   of currently active voice-band data calls, and the incoming call based on the silence suppression gain.

44. The software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to:

25   deny access to the communication network if the effective bandwidth is greater than a provisioned bandwidth for the communication path.

45. The software product of claim 44 wherein the communication software is operational when executed by the processor to direct the processor to:

30   grant access to the communication network if the effective bandwidth is less than the provisioned bandwidth for the communication path.

46. The software product of claim 44 wherein the communication software is operational when executed by the processor to direct the processor to:

grant access to the communication network if the required bandwidth is equal to the

5   provisioned bandwidth for the communication path.

47. The software product of claim 35 wherein the communication software is operational when executed by the processor to direct the processor to:

exchange the call traffic with the communication network over a packet communication

10   connection.

48. The software product of claim 35 wherein the communication software is operational when executed by the processor to direct the processor to:

exchange the call traffic with the communication network over an asynchronous transfer

15   mode virtual channel connection.